



FIRMWARE ANALYSIS AND COMPARISON TOOL

Firmware Analysis of Cisco/Linksys SRW2008 - 1.0.4

Meta Data

HID	Cisco/Linksys SRW2008 - 1.0.4
Device Name	SRW2008
Vendor	Cisco/Linksys
Device Class	Switch (Managed)
Version	1.0.4
Release Date	2007-09-06
Size	3.22 MiB (3,378,139 bytes)

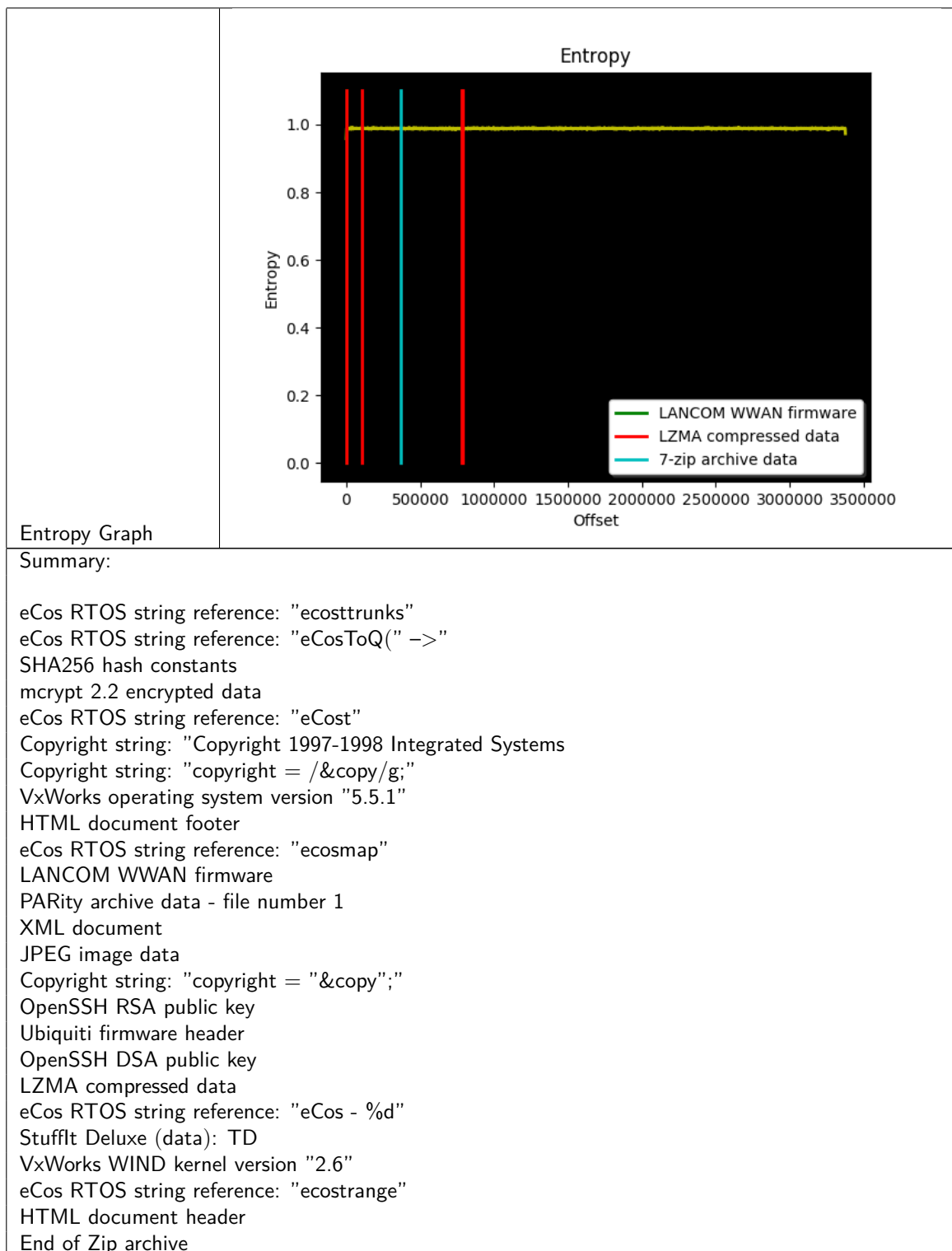
Analysis

base64decoder

Time of Analysis	2018-03-29 12:54:45
Plugin Version	0.1.2
Summary	Base64 code detected

binwalk

Time of Analysis	2018-03-29 12:57:40
Plugin Version	0.5
Signature Analysis:	
DECIMAL HEXADECIMAL DESCRIPTION	
<hr/>	
81 0x51 LANCOM WWAN firmware	
272 0x110 LZMA compressed data, properties: 0x5D, dictionary size: 8388608 bytes, uncompressed size: 550208 bytes	
105822 0x19D5E LZMA compressed data, properties: 0x5D, dictionary size: 8388608 bytes, uncompressed size: 1049671 bytes	
368135 0x59E07 7-zip archive data, version 0.2	
781528 0xBECD8 LZMA compressed data, properties: 0x5D, dictionary size: 8388608 bytes, uncompressed size: 27900 bytes	
790127 0xC0E6F LZMA compressed data, properties: 0x5D, dictionary size: 8388608 bytes, uncompressed size: 9596576 bytes	



GIF image data
 Neighborly text
 Copyright string: "Copyright 1984-2002 Wind River Systems
 Zip archive data
 Copyright string: "Copyright 1986-1997 Epilogue Technology Corporation"
 eCos RTOS string reference: "eCosToQ(COSNum)"
 CRC32 polynomial table
 Certificate in DER format (x509 v3)
 MPEG transport stream data
 Copyright string: "copyright
 7-zip archive data
 LANCOM firmware header
 Base64 standard index table
 eCos RTOS string reference: "eCosRuleToNetwork"

cpu architecture

Time of Analysis	2018-03-29 12:57:52
Plugin Version	0.3.1

crypto material

Time of Analysis	2018-03-29 12:57:41
Plugin Version	0.5

exploit mitigations

Time of Analysis	2018-03-29 12:57:54
Plugin Version	0.1.1

file hashes

Time of Analysis	2018-03-29 12:58:01
Plugin Version	1.0
imphash	None
md5	9665a7ad243bda91ce6312ed3aab305d
ripemd160	5e0313f309e610bece33bfece02a933bb80bc7b9
sha1	5ea563d79a7ed3f8c7a872e0bf31db9ef8c90711
sha256	b7c55a6de9fd1b85ec07f661b4d21638021999e2b1e754de1922f3b01f2cedb8
sha512	937f575dfffce1f986faf4ca8e3ba836f6d6f9dfaab582c4561fa93c7c2b 0ceee92efdb3e3e87abe0bbf9a867bd3f1169f27c06e7f467f549b0d40c3f814217
ssdeep	98304:nNasK108t/KzpM7NURKVt9RMN6sc0KzLgP:nNFK1Dt/KFMX0670KIP
whirpool	69477a040d3430dc6706d1bb6a4e2088814e24e6f3d73eb14b2e0e41aee6b a0220d98a4896b872abd558c9cd4945c7861e76fca8e6846f650940482c7697ce48

file type

Time of Analysis	2018-03-29 12:57:50
Plugin Version	1.0
File Type	ROS Container
MIME	firmware/ros
Summary	firmware/ros application/octet-stream application/x-7z-compressed image/jpeg application/zip text/plain application/x-lzma application/x-java-applet image/gif

init systems

Time of Analysis	2018-03-29 12:57:58
Plugin Version	0.4.1

ip and uri finder

Time of Analysis	2018-03-29 12:57:48
Plugin Version	0.4.1
IPs v4	1.0.4.1
IPs v6	:: 0:: 3:: ::c ::D 5:: ::7 ::6B ::4 B:: E:: ::9a9 A:: b::
URIs	list is empty
Summary:	255.255.255.255 1.1.1.19 1.1.1.17

1.1.1.5
239.255.255.255
10.0.0.9
10.1.2.1
aposhttp://mynsURI
0::
176.212.0.0
10.0.0.2
7.10.1.3
149.36.184.198
tftp://10.1.2.3/my_image.ros
10.1.1.1
64.4.1.1
e::
224.0.0.251
0.0.255.0
tftp://10.0.0.6/saved-image
tftp://oob/10.7.8.9/my_boot.rfb
tftp://10.1.2.3/saved-config
flash://startup-config
tftp://10.0.0.6/saved-boot-image
64.4.1.8
1.1.1.2
tftp://10.7.8.9/my_boot.rfb
1.1.1.7
1.1.1.11
3::
64.4.1.4
tftp://10.1.2.3/saved-image-file
1.1.1.15
255.255.0.255
::
1.1.1.8
1.89.64.5
2.2.1.10
tftp://10.1.2.3/my_image.dos
3.6.2.4
tftp://oob/
1.1.1.4
64.5.1.5
2.2.1.16
6.3.10.1
tftp://10.0.0.2/saved_cfg
tftp://ip
64.4.1.6
7.2.1.8
http://www.linksys.com
1.1.1.18

2.2.1.11
64.4.1.3
2.1.16.1
10.4.5.6
127.0.0.1
tftp://oob/ip
9::9996
0.9.6.1
0.0.255.255
10.7.8.9
2.1.10.7
2.1.31.1
64.4.1.7
10.0.0.6
5::
0.0.0.255
tftp://10.1.2.3/my_boot.rfb
tftp://10.4.5.6/my_image.dos
B::
7.2.1.13
1.1.1.12
unit://3/image
89.98.2.1
::1
1.89.98.2
tftp://oob/10.1.2.3/saved-config
::9a9
1.0.4.1
::c
10.1.2.2
unit://member/filename
2.2.1.1
255.0.0.0
10.1.2.3
E::
::6B
171.205.239.111
10.1.1.3
1.1.1.10
64.4.1.12
64.5.1.1
7.2.1.9
tftp://oob/10.4.5.6/my_image.dos
::FFFF
<http://www.w3.org/1999/XSL/Transform>
224.0.0.255
4.1.89.98
<http://www.linksys.com/>

1.1.1.13
64.4.1.5
unit://4/boot
tftp://oob/10.1.2.3/saved-image-file
0.0.0.0
0.255.255.255
64.4.1.11
flash://image
64.5.1.2
A::
10.7.10.1
::4
10.1.1.2
1.6.1.1
192.168.1.254
0.255.0.0
1.89.64.4
255.0.255.255
<http://www.openssl.org/support/faq.html>
1.1.1.6
7.2.1.4
1.1.1.14
7.2.1.3
::7
flash://filename
224.0.0.0
2.2.1.17
b::
1.1.1.9
7.10.1.4
::D
1.1.1.16
64.4.1.10
64.5.1.3
1.1.1.3
239.255.255.250
7.2.1.10
1.3.3.1
unit://2/image
64.4.1.9
<http://www.w3.org/1999/xhtml>
4.1.89.64
1.0.0.0
tftp://10.0.0.9/commands-file
64.4.1.2
255.255.255.0
64.5.1.6
7.2.1.16

software components

Time of Analysis	2018-03-29 12:57:44
Plugin Version	0.3
Summary	GoAhead OpenSSL VxWorks 5.5.1 OpenSSL 0.9.8 OpenSSH

printable strings

Time of Analysis	2018-03-29 12:57:47
Plugin Version	0.2
String Count	7262

users and passwords

Time of Analysis	2018-03-29 12:54:43
Plugin Version	0.4

string evaluator

Time of Analysis	2018-03-29 12:57:57
Plugin Version	0.2
String Count	7262

unpacker

Time of Analysis	2018-03-29 12:54:36
Plugin Version	0.7
Plugin	ROSTFile
Extracted	6
Output:	

ROS PACK firmware archive payload extractor

Version 0.6

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Filename: /media/data/fact_fw_data/b7/b7c55a6de9fd1b85ec07f661b4d21638021999e2b1e754de1922f3b01f2cedb8_33781

File length: 3378139 (0x338bdb)

ARC Magic: LSS2

ARC Index: 1.01

Header version: 1

length: 48

Payload

length: 3378091 (0x338bab)

checksum: 430634778 (0x19aaf71a)

Link Time: 09:12:58

Link Date: 2007-09-06

Signature: PACK

Dir Entries: 6

Extracted CLI_FILE from offset 272 (105518 bytes)

Extracted DELSCRf from offset 105822 (262313 bytes)

Extracted EWS_FILE from offset 368135 (413361 bytes)

Extracted UPNP_FILE from offset 781528 (8407 bytes)

Extracted DATETIME_C from offset 789935 (160 bytes)

Extracted RSCODE from offset 790127 (2588012 bytes)

Payload length: 3378091 (0x338bab)

Payload extracted: 3378091 (0x338bab)

Payload checksum: 430634778 (0x19aaf71a)

Calculated checksum: 430634778 (0x19aaf71a)

Size Packed -> Un-packed	3.22 MiB -> 3.22 MiB
Entropy	0.90
Summary	unpacked no data lost data lost

malware scanner

Time of Analysis	2018-03-29 12:54:40
Plugin Version	0.3
MD5	9665a7ad243bda91ce6312ed3aab305d
System Version	0.2.6
Scanners Number	1
Positives	0
Scanners	ClamAV

Scanns	ClamAV :: result:clean ClamAV :: detected:False ClamAV :: version:ClamAV 0.99.4/24430/Thu Mar 29 06:23:16 2018
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